GOVERNMENT OF INDIA
WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
LOK SABHA

UNSTARRED QUESTION NO:872
ANSWERED ON:21.07.2016
Availability of Water
Singh Shri Hukum

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:

(a) whether the Government has any details of the availability of water in India, if so, the details thereof, State/UT-wise and if not, the reasons therefor;
(b) whether the Government has any details of the exploitation of groundwater across the country, if so, the details thereof, State/UT-wise and if not, the reasons therefor;
(c) whether in some States, the groundwater levels have dipped alarmingly, if so, the details thereof and the reasons therefor; and
(d) whether the indiscriminate construction of artificial water bodies and check dams by the Government made matters worse in some States, if so, the details thereof and steps being taken to correct the situation to protect the groundwater from any type of exploitation in future?

Answer

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION
(DR. SANJEEV KUMAR BALYAN)

(a) & (b) As per the basin-wise assessment of water resources conducted by Central Water Commission, the average annual water availability in the country is 1869 Billion Cubic Meters (BCM). However due to topographic, hydrological and other constraints the utilizable water has been estimated to be about 1123 BCM comprising 690 BCM of surface water and 433 BCM of replenishable ground water. The net annual ground water availability is 398 BCM out of which annual ground water utilization (draft) is estimated as 245 BCM. Out of 6607 assessment units (Blocks/ Mandals/ Talukas/Fikras/ Districts) in the Country assessed during the assessment, 1071 units falling in 16 States and 2 UTs have been categorized as 'Over-exploited, whereas, 217 units have been categorized as critical and 697 as semi-critical. The overall stage of ground water development is 62%. State/UT-wise details of ground water resources availability, utilization and stage of development are given at Annexure - I.A Statement indicating the basin wise details of water resources potential and utilizable surface water resources is at Annexure II.

(c) As per the ground water level data monitored by Central Ground Water Board in the Country, Pre-monsoon (April/ May, 2016) ground water level data when compared with the decadal average (2006-2015) indicates that around 35% of the wells have registered rise and 65% wells are showing decline in ground water level, mostly in the range of 0-2 m (meters), in almost all the States/UTs of the country, except a few States namely Arunachal Pradesh, Goa, Pondicherry, Tamil Nadu and Tripura. The tabular Statement of State-wise details in this regard is given in Annexure III. The reasons for the decline in ground water level throughout the country can be attributed to increase in the withdrawal of ground water for meeting the demands as well as deficient and erratic rainfall in the previous years.

(d) Central Ground Water Board has taken up several artificial recharge projects comprising of construction of Check dams, percolation ponds as demonstrative projects in the Country during various plan periods. The impact assessment studies carried out so far have shown rise in ground water levels and enhanced sustainability of ground water abstraction structures after implementation of projects. However, no adverse effects have been reported so far in this regard. Further, CGWB has prepared a conceptual document entitled "Master Plan for Artificial Recharge to Ground Water in India" during the year 2013, which envisages construction of different types of Artificial Recharge and Rainwater Harvesting structures in the Country in an area of 9,41,541 sq.km by harnessing surplus monsoon runoff to augment ground water resources. The Master Plan has been circulated to all State Governments for implementation.

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ANNEXURE-I

Annexure referred to in reply to Parts (a) and (b) of the Unstarred Question No. 872 to be answered on 21.07.2016 in the Lok Sabha regarding "Availability of Water"

STATE-WISE GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT INDIA (As on 2011)
(in BCM)
Sl. No. States / Union Territories Annual Replenishable Ground Water Resource Natural Discharge during non-monsoon season Net Annual Ground Water Availability Annual Ground Water Draft Stage of Ground Water Development (%)
Irrigation Domestic and industrial uses Total

1 Andhra Pradesh 20.7892 1.9064 18.8828 6.2694 0.7381 7.0075 37
2 Telangana 15.098 1.4138 13.6844 6.9103 0.5919 7.502 55
3 Arunachal Pradesh 4.5100 0.4500 4.0600 0.0020 0.0010 0.0030 0.08

4 Assam 28.5200 2.7300 25.7900 2.8600 0.6400 3.4900 14
5 Bihar 29.3350 2.4705 26.8645 10.2550 1.6960 11.9509 44
6 Chhattisgarh 12.4200 0.7900 11.6300 3.4300 0.6200 4.0500 35
7 Delhi 0.3105 0.0234 0.2871 0.1402 0.2519 0.3922 137
8 Goa 0.2424 0.0970 0.1454 0.0101 0.0311 0.0411 28
9 Gujarat 18.5686 0.9832 17.5854 10.7477 1.1074 11.8551 67
10 Haryana 10.7800 0.9900 9.7900 12.3500 0.7100 13.0500 133
11 Himachal Pradesh 0.5590 0.0280 0.5311 0.2506 0.1272 0.3778 71
12 Jammu & Kashmir 4.2512 0.4251 3.8261 0.1988 0.6077 0.8065 21
13 Jharkhand 6.3100 0.5500 5.7600 1.3100 0.5500 1.8600 32
14 Karnataka 17.0266 2.2154 14.8112 8.5916 0.8198 9.4114 64
15 Kerala 6.6864 0.6134 6.0730 1.3046 1.5310 2.8355 47
16 Madhya Pradesh 35.0406 1.7520 33.2886 17.4809 1.3527 18.8335 57
17 Maharashtra 33.9474 1.7955 32.1519 16.1460 1.0293 17.1754 53
18 Manipur 0.4401 0.0440 0.3961 0.0033 0.0007 0.0040 1.02
19 Meghalaya 1.7805 0.1780 1.6024 0.0015 0.0002 0.0017 0.08
20 Mizoram 0.0304 0.0030 0.0273 0.0000 0.0010 0.0010 3.52
21 Nagaland 0.6159 0.0616 0.5543 0.0000 0.0340 0.0340 6.13
22 Odisha 17.7768 1.0859 16.6909 3.8126 0.9162 4.7288 28
23 Punjab 22.5300 2.2100 20.3200 34.1700 0.7100 34.8800 172
24 Rajasthan 11.9414 1.1125 10.8290 13.1332 1.7098 14.8430 137
25 Sikkim* - - 0.0442 0.0027 0.0086 0.0113 26
26 Tamil Nadu 21.5326 2.1533 19.3793 13.1688 1.7638 14.9326 77
27 Tripura 2.5866 0.2286 2.3580 0.0932 0.0694 0.1626 7
28 Uttar Pradesh 77.1900 5.5300 71.6600 48.7400 4.0400 52.7800 74
29 Uttarakhand 2.0403 0.0449 1.9954 1.1033 0.0298 1.1331 57
30 West Bengal 29.2511 2.6688 26.5823 9.7195 0.9731 10.6926 40
Total States 432.11 34.55 397.60 222.21 22.66 244.85 62
Union Territories
1 Andaman & Nicobar 0.3080 0.0216 0.2865 0.0006 0.0121 0.0127 4.44
2 Chandigarh 0.0216 0.0022 0.0194 0.0000 0.0000 0.0000 0
3 D & N Haveli 0.0622 0.0031 0.0591 0.0072 0.0056 0.0129 22
4 Daman & Diu 0.0181 0.0012 0.0169 0.0145 0.0019 0.0164 97
5 Lakshadweep 0.0105 0.0070 0.0035 0.0000 0.0023 0.0023 67
6 Puducherry 0.1893 0.0190 0.1703 0.1237 0.0293 0.1530 90
Total UTs 0.6100 0.0500 0.5600 0.1500 0.0500 0.2000 36
Grand Total 432.7200 34.6000 398.1600 222.3600 22.7100 245.0500 62
* Note: Net ground water availability in Sikkim has been estimated based on spring discharge and is not reflected in the corresponding total annual replenishable resource. This results in a difference of 0.044 bcm in the State Total and Grand Total.

Annexure-II
Annexure referred to in reply to Parts (a) and (b) of the Unstarred Question No. 872to be answered on 21.07.2016 in the Lok Sabha regarding "Availability of Water"

WATER RESOURCES POTENTIAL OF RIVER BASINS OF INDIA
Sl.
No. River Basin Catchment area (Sq.Km) Average Water Resources Potential (BCM)* Utilizable surface water resources (BCM)**
1 Indus 321289 73.3 46
2 Ganga-Brahmaputra-Meghna
(a) Ganga 861452 525 250
(b) Brahmaputra 194413 537.2 24
(c) Barak & others 41723 48.4
3 Godavari 312812 110.5 76.3
4 Krishna 258948 78.1 58
5 Cauvery 81155 21.4 19
6 Subernarekha 29196 12.4 6.8
7 Brahmani-Baitarni 51822 28.5 18.3
8 Mahanadi 141589 66.9 50
9 Pennar 55213 6.3 6.9
10 Mahi 34842 11 3.1
11 Sabarmati 21674 3.8 1.9
12 Narmada 98796 45.6 34.5
13 Tapi 65145 14.9 14.5
14 West Flowing Rivers from Tapi to Tadri 55940 87.4 11.9
15 West Flowing Rivers from Tadri to Kanyakumari 56177 113.5 24.3
16 East Flowing Rivers between Mahanadi and Pennar 86643 22.5 13.1
17 East Flowing Rivers between Pennar& Kanyakumari 100139 16.5 16.5
18 West Flowing Rivers of Kutch and Saurashtra including Luni 321851 15.1 15
19 Area of Inland Drainage in Rajasthan --- Negligible --
20 Minor Rivers draining into Myanmar (Burma) and Bangladesh 36302 31 --
Total 1,869.4 690

*CWC Publication "Reassessment of Water Resources Potential of India, 1993"
** CWC Publication "Water Resources of India, 1988"

Annexure III

Annexure referred to in reply to Part (c) of the Unstarred Question No. 872to be answered on 21.07.2016 in the Lok Sabha regarding "Availability of Water"

State-wise Decadal Water Level Fluctuation with Mean [Pre-monsoon (2006 to 2015] and Pre-monsoon 2016

S. No.	Name of State	No. of wells Analyzed	Rise		Fall	
			No	%	No	%
1	Andhra Pradesh	547	236	43	308	56
2	Arunachal Pradesh	14	10	71	4	29
3	Assam	182	84	46	98	54
4	Bihar	551	180	33	369	67
5	Chandigarh	11	4	36	7	64
6	Chhattisgarh	616	165	27	451	73
7	Dadra & Nagar Haveli	12	6	50	6	50
8	Daman & Diu	10	2	20	8	80
9	Delhi	115	26	23	89	77
10	Goa	70	41	59	29	41
11	Gujarat	738	254	34	475	64
12	Haryana	302	111	37	191	63
13	Himachal Pradesh	95	36	38	59	62
14	Jammu & Kashmir	225	83	37	142	63
15	Jharkhand	212	86	41	126	59
16	Karnataka	1380	415	30	949	69
17	Kerala	1240	454	37	779	63
18	Madhya Pradesh	1343	502	37	838	62
19	Maharashtra	1487	437	29	1041	70
20	Meghalaya	17	6	35	11	65
21	Odisha	1103	395	36	705	64
22	Pondicherry	6	5	83	1	17
23	Punjab	238	59	25	179	75
24	Rajasthan	829	346	42	481	58
25	Tamil Nadu	587	345	59	242	41
26	Telangana	377	66	18	308	82
27	Tripura	28	21	75	7	25
28	Uttar Pradesh	629	95	15	534	85
29	Uttarakhand	44	21	48	23	52
30	West Bengal	899	310	34	589	66
Total		13907	4801	34.5	9049	65.1

Note: About 0.4% of wells have not shown any change in GW levels.